Serial Numb r: 08/779460 B

☐ Changed a file from non-ASCII to ASCII

☐ Changed the margins in cases where the sequence text was "wrapped down to the next line.

☐ Edited a format error in the Current Application Data section, specifically:
_____

☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____.

☐ Added the mandatory heading and subheadings for "Current Application Data".

☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
_____

☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
_____

☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
_____

☑ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

☐ Inserted colons after headings/subheadings. Headings edited included:
_____

☑ Deleted extra, invalid, headings used by an applicant, specifically:
"TELEFAX" — replaced w/ TELEFAX

☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as_____ .

☐ Inserted mandatory headings, specifically: _____

☐ Corrected an obvious error in the response, specifically:
_____

☐ Edited identifiers where upper case is used but lower case is required, or vice versa.

☐ Corrected an error in the Number of Sequences field, specifically:
_____

☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

☐ Other:
_____
_____
_____
_____

*Examin r: The abov c rrections must be communicated to th applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

> This Raw Listing contains the General
> Information Section and up t the first pages.

ENTERED

```
 1                              SEQUENCE LISTING
 2
 3     (1)    General Information:
 4
 5            (i)   APPLICANT:  Oscar Johannes Maria GODDIJN
 6                              Teunis Cornelis VERWOERD
 7                              Ronny Wilhelmus Hermanus Henrika KRUTWAGEN
 8                              Eline VOOGD
 9
10            (ii) TITLE OF INVENTION:  ENHANCED ACCUMULATION OF TREHALOSE
11                                        IN PLANTS
12
13            (iii)    NUMBER OF SEQUENCES: 27
14
15            (iv) CORRESPONDENCE ADDRESS:
16
17                   (A)   ADDRESSEE:              LADAS & PARRY
18
19                   (B)   STREET:        26 WEST 61 STREET
20
21                   (C)   CITY:                   NEW YORK
22
23                   (D)   STATE:         NY
24
25                   (E)   COUNTRY:       USA
26
27                   (F)   ZIP:           10023
28
29
30
31            (v)    COMPUTER READABLE FORM:
32
33                   (A)   MEDIUM TYPE:   3-1/4" Disk    1.44 MB
34
35                   (B)   COMPUTER:      IBM PC Compatible
36
37                   (C)   OPERATING SYSTEM: Microsoft Windows for Workgroups 3.11
38
39                   (D)   SOFTWARE:      WordPerfect 6.1 for Windows
40
41            (vi) CURRENT APPLICATION DATA:
42
43                   (A)   APPLICATION NUMBER:     08/779,460
44
45                   (B)   FILING DATE:   07-JAN-1997
46
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PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION   *US/08/779,460B*

DATE: 04/13/98
TIME: 14:27:46

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--> 0l↳47   (C)   **CLASSIFICATION:**   435
       48
       49
       50   (vii)   PRIOR APPLICATION DATA:
       51
       52   (A)   APPLICATION NUMBER: PY000009/96
       53
       54   (B)   FILING DATE: 12-JAN-1996
       55
       56   (viii)   ATTORNEY/AGENT INFORMATION:
       57
       58   (A)   NAME: MASS, Clifford J.
       59
       60   (B)   REGISTRATION NO.: 30,086
       61
       62   (C)   REF./DOCKET NO.: U-011098-6
       63
       64   (ix) TELECOMMUNICATION INFORMATION:
       65
       66   (A)   TELEPHONE: (212) 708-1890
       67
       68   (B)   TELEFAX: (212)- 246-8959
       69
       70   (C)   TELEX: 233288
       71
       72
       73 (2) INFORMATION FOR SEQ ID NO: 1:
       74
       75   (i) SEQUENCE CHARACTERISTICS:
       76   (A) LENGTH: 2621 base pairs
       77   (B) TYPE: nucleic acid
       78   (C) STRANDEDNESS: double
       79   (D) TOPOLOGY: linear
       80
       81   (ii) MOLECULE TYPE: cDNA to mRNA
       82
       83   (iii) HYPOTHETICAL: NO
       84
       85   (ix) FEATURE:
       86   (A) NAME/KEY: CDS
       87   (B) LOCATION: 25..2485
       88   (D) OTHER INFORMATION: /function= "trehalose phosph.
       89   synthase and trehalose phosph. phosphatase"
       90   /product= "bipartite enzyme"
       91
       92   (ix) FEATURE:
       93   (A) NAME/KEY: unsure
       94   (B) LOCATION: 1609..1611
       95
       96
       97   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
       98
       99 CTGATCCTGC GGTTTCATCA CAAT ATG ATA CTC TTA CAT CTG ATG CCC CTT   51

```
100                        Met Ile Leu Leu His Leu Met Pro Leu
101                         1                   5
102
103   CAG ATG CTC CCA AAT AGG TTG ATT GTC GTA TCG AAT CAG TTA CCC ATA        99
104   Gln Met Leu Pro Asn Arg L u Ile Val Val Ser Asn Gln Leu Pro Ile
105    10                  15                  20                  25
106
107   ATC GCT AGG CTA AGA CTA ACG ACA ATG GAG GGT CCT TTT GGG ATT TCA        147
108   Ile Ala Arg Leu Arg Leu Thr Thr Met Glu Gly Pro Phe Gly Ile Ser
109                   30                  35                  40
110
111   CTT GGG ACG AGA GTT CGA TTT ACA TGC ACA TCA AAG ATG CAT TAC CCG        195
112   Leu Gly Thr Arg Val Arg Phe Thr Cys Thr Ser Lys Met His Tyr Pro
113                   45                  50                  55
114
115   CAG CCG TTG AGG TTT TCT ATT CTT GGC GAT CCA CTA AGG GCT GAC GTT        243
116   Gln Pro Leu Arg Phe Ser Ile Leu Gly Asp Pro Leu Arg Ala Asp Val
117                   60                  65                  70
118
119   GGC CCT ACC GAA CAA GAT GAC GTG TCA AAG ACA TTG CTC GAT AGG TTT        291
120   Gly Pro Thr Glu Gln Asp Asp Val Ser Lys Thr Leu Leu Asp Arg Phe
121                   75                  80                  85
122
123   AAT TGC GTT GCG GTT TTT GTC CCT ACT TCA AAA TGG GAC CAA TAT TAT        339
124   Asn Cys Val Ala Val Phe Val Pro Thr Ser Lys Trp Asp Gln Tyr Tyr
125    90                  95                  100                 105
126
127   CAC TGC TTT TGT AAG CAG TAT TTG TGG CCG ATA TTT CAT TAC AAG GTT        387
128   His Cys Phe Cys Lys Gln Tyr Leu Trp Pro Ile Phe His Tyr Lys Val
129                   110                 115                 120
130
131   CCC GCT TCT GAC GTC AAG AGT GTC CCG AAT AGT CGG GAT TCA TGG AAC        435
132   Pro Ala Ser Asp Val Lys Ser Val Pro Asn Ser Arg Asp Ser Trp Asn
133                   125                 130                 135
134
135   GCT TAT GTT CAC GTG AAC AAA GAG TTT TCC CAG AAG GTG ATG GAG GCA        483
136   Ala Tyr Val His Val Asn Lys Glu Phe Ser Gln Lys Val Met Glu Ala
137                   140                 145                 150
138
139   GTA ACC AAT CGT AGC AAT TAT GTA TGG ATA CAT GAC TAC CAT TTA ATG        531
140   Val Thr Asn Arg Ser Asn Tyr Val Trp Ile His Asp Tyr His Leu Met
141    155                 160                 165
142
143   ACG CTA CCG ACT TTC TTG AGG CGG GAT TTT TGT CGT TTT AAA ATC GGT        579
144   Thr Leu Pro Thr Phe Leu Arg Arg Asp Phe Cys Arg Phe Lys Ile Gly
145   170                 175                 180                 185
146
147   TTT TTT CTG CAT AGC CCG TTT CCT TCC TCG GAG GTT TAC AAG ACC CTA        627
148   Phe Phe Leu His Ser Pro Phe Pro Ser Ser Glu Val Tyr Lys Thr Leu
149                   190                 195                 200
150
151   CCA ATG AGA AAC GAG CTC TTG AAG GGT CTG TTA AAT GCT GAT CTT ATC        675
152   Pro Met Arg Asn Glu Leu Leu Lys Gly Leu Leu Asn Ala Asp Leu Ile
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153              205              210              215
154
155   GGG TTC CAT ACA TAC GAT TAT GCC CGT CAT TTT CTA ACG TGT TGT AGT      723
156   Gly Ph  His Thr Tyr Asp Tyr Ala Arg His Phe Leu Thr Cys Cys Ser
157           220              225              230
158
159   CGA ATG TTT GGT TTG GAT CAT CAG TTG AAA AGG GGG TAC ATT TTC TTG      771
160   Arg Met Phe Gly Leu Asp His Gln Leu Lys Arg Gly Tyr Ile Phe Leu
161           235              240              245
162
163   GAA TAT AAT GGA AGG AGC ATT GAG ATC AAG ATA AAG GCG AGC GGG ATT      819
164   Glu Tyr Asn Gly Arg Ser Ile Glu Ile Lys Ile Lys Ala Ser Gly Ile
165   250              255              260              265
166
167   CAT GTT GGT CGA ATG GAG TCG TAC TTG AGT CAG CCC GAT ACA AGA TTA      867
168   His Val Gly Arg Met Glu Ser Tyr Leu Ser Gln Pro Asp Thr Arg Leu
169           270              275              280
170
171   CAA GTT CAA GAA GTC CAA AAA CGT TCG AAG GAA ATC GTG CTA CTG GGA      915
172   Gln Val Gln Glu Val Gln Lys Arg Ser Lys Glu Ile Val Leu Leu Gly
173           285              290              295
174
175   GTT GAT GAT TTG GAT ATA TTC AAA GGT GTG AAC TTC AAG GTT TTA GCG      963
176   Val Asp Asp Leu Asp Ile Phe Lys Gly Val Asn Phe Lys Val Leu Ala
177           300              305              310
178
179   TTG GAG AAG TTA CTT AAA TCA CAC CCG AGT TGG CAA GGG CGT GTG GAA     1011
180   Leu Glu Lys Leu Leu Lys Ser His Pro Ser Trp Gln Gly Arg Val Glu
181           315              320              325
182
183   AAG GTG CAA ATC TTG AAT CCT CTG CGC CGT TGC CAA GAC GTC GAT GAG     1059
184   Lys Val Gln Ile Leu Asn Pro Leu Arg Arg Cys Gln Asp Val Asp Glu
185   330              335              340              345
186
187   ATC AAT GCC GAG ATA AGA ACA GTC TGT GAA AGA ATC AAT AAC GAA CTG     1107
188   Ile Asn Ala Glu Ile Arg Thr Val Cys Glu Arg Ile Asn Asn Glu Leu
189           350              355              360
190
191   GGA AGC CCG GGA TAC CAG CCC GTT GTG TTA ATT GAT GGG CCC GTT TCG     1155
192   Gly Ser Pro Gly Tyr Gln Pro Val Val Leu Ile Asp Gly Pro Val Ser
193           365              370              375
194
195   TTA AGT GAA AAA GCT GCT TAT TAT GCT ATC GCC GAT ATG GCA ATT GTT     1203
196   Leu Ser Glu Lys Ala Ala Tyr Tyr Ala Ile Ala Asp Met Ala Ile Val
197           380              385              390
198
199   ACA CCG TTA CGT GAC GGA CTG AAT CTT ATC CCG TAC GAG TAC GTC GTT     1251
200   Thr Pro Leu Arg Asp Gly Leu Asn Leu Ile Pro Tyr Glu Tyr Val Val
201           395              400              405
202
203   TCC CGA CAA AGT GTT AAT GAC CCA AAT CCC AAT ACT CCA AAA AAG AGC     1299
204   Ser Arg Gln Ser Val Asn Asp Pro Asn Pro Asn Thr Pro Lys Lys Ser
205   410              415              420              425
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206
207   ATG CTA GTG GTC TCC GAG TTC ATC GGT GTT TCA CTA TCT TTA ACC GGG      1347
208   Met Leu Val Val Ser Glu Phe Ile Gly Val Ser Leu Ser Leu Thr Gly
209                   430                 435                 440
210
211   GCC ATA CGG GTC AAC CCA TGG GAT GAG TTG GAG ACA GCA GAA GCA TTA      1395
212   Ala Ile Arg Val Asn Pro Trp Asp Glu Leu Glu Thr Ala Glu Ala Leu
213                   445                 450                 455
214
215   TAC GAC GCA CTC ATG GCT CCT GAT GAC CAT AAA GAA ACC GCC CAC ATG      1443
216   Tyr Asp Ala Leu Met Ala Pro Asp Asp His Lys Glu Thr Ala His Met
217                   460                 465                 470
218
219   AAA CAG TAT CAA TAC ATT ATC TCC CAT GAT GTA GCT AAC TGG GCT AGC      1491
220   Lys Gln Tyr Gln Tyr Ile Ile Ser His Asp Val Ala Asn Trp Ala Ser
221           475                 480                 485
222
223   TTC TTT CAA GAT TTA GAG CAA GCG TGC ATC GAT CAT TCT CGT AAA CGA      1539
224   Phe Phe Gln Asp Leu Glu Gln Ala Cys Ile Asp His Ser Arg Lys Arg
225   490                 495                 500                 505
226
227   TGC ATG AAT TTA GGA TTT GGG TTA GAT ACT AGA GTC GTC TTT TTG ATG      1587
228   Cys Met Asn Leu Gly Phe Gly Leu Asp Thr Arg Val Val Phe Leu Met
229                   510                 515                 520
230
231   AGA AGT TTA GCA AGT TGG ATA AAG ATG TCT TGG AAG AAT GCT TAT TCC      1635
232   Arg Ser Leu Ala Ser Trp Ile Lys Met Ser Trp Lys Asn Ala Tyr Ser
233                   525                 530                 535
234
235   ATG GCT CAA AAT CGG GCC ATA CTT TTG GAC TAT GAC GGC ACT GTT ACT      1683
236   Met Ala Gln Asn Arg Ala Ile Leu Leu Asp Tyr Asp Gly Thr Val Thr
237           540                 545                 550
238
239   CCA TCT ATC AGT AAA TCT CCA ACT GAA GCT GTT ATC TCC ATG ATC AAC      1731
240   Pro Ser Ile Ser Lys Ser Pro Thr Glu Ala Val Ile Ser Met Ile Asn
241           555                 560                 565
242
243   AAA CTG TGC AAT GAT CCA AAG AAC ATG GTG TTC ATC GTT AGT GGA CGC      1779
244   Lys Leu Cys Asn Asp Pro Lys Asn Met Val Phe Ile Val Ser Gly Arg
245   570                 575                 580                 585
246
247   AGT AGA GAG AAA ATC TTG GCA GTT GGT TCG GCG CGT GTG AGA ACC CGC      1827
248   Ser Arg Glu Lys Ile Leu Ala Val Gly Ser Ala Arg Val Arg Thr Arg
249                   590                 595                 600
250
251   CAT TGC ACT GAG CAC GGA TAC TTT ATA AGG TGG GCG GGT GAT CAA GAA      1875
252   His Cys Thr Glu His Gly Tyr Phe Ile Arg Trp Ala Gly Asp Gln Glu
253                   605                 610                 615
254
255   TGG GAA ACG TGC GCA CGT GAG AAT AAT GTC GGG TGG ATG GAT GGA AAT      1923
256   Trp Glu Thr Cys Ala Arg Glu Asn Asn Val Gly Trp Met Asp Gly Asn
257           620                 625                 630
258
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SEQUENCE VERIFICATION REPORT
PATENT APPLICATION *US/08/779,460B*

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47	Wrong Classification	(C) CLASSIFICATION: 435